

ABSTRACT OF THE DISCLOSURE

A modular robotic platform is provided having four legs mounted to a body. Each of the legs is mounted to the body via a steering assembly so as to pivot in a first plane relatively to the body. Each leg includes an endless track assembly having a first wheel, a drive system for driving the first wheel, a second wheel, an endless track for rotatably coupling the second wheel to the first wheel, and a track tensioning assembly for pivoting the leg in a second plane perpendicular to the first plane. Each leg includes a locomotion controller and a local environment recognition module. Synchronisation of the legs is achieved by a central controller, which gathers data information from each leg through a synchronisation bus. A coordination bus allows to exchange data information between different modules of the robotic platform, including the legs, the central control system and other systems or modules such as an energizing system, a pitch gauge system, etc. A communication protocol is used allowing each module to know which data messages carried on the communication buses are intended for it.